Celebrating and supporting women

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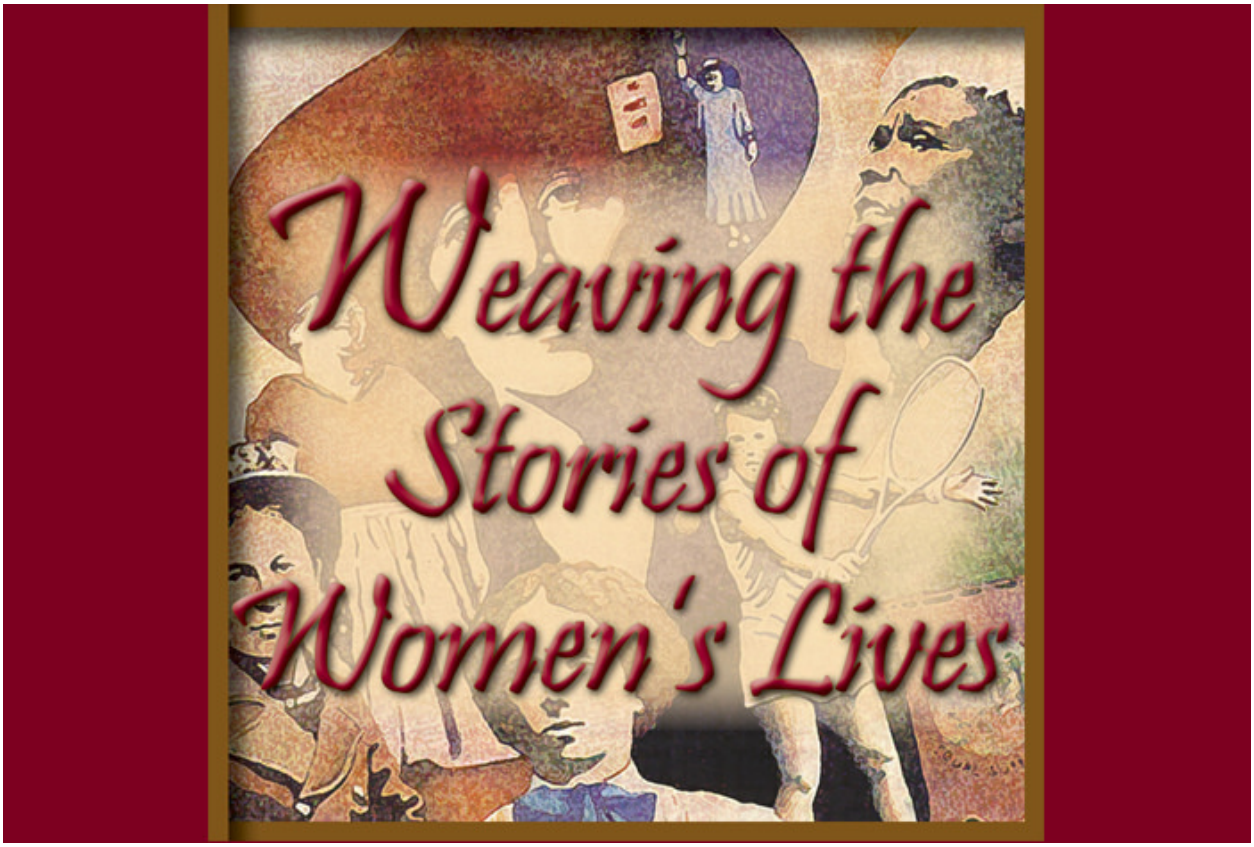

Major institutions across the country, including Los Alamos National Laboratory, took the international Women's History Month in March as an occasion to pay tribute to women's accomplishments.

At the Laboratory, a Women's History Month quiz, for example, asked employees to find answers to questions like "Who was the first American woman and youngest American to travel into space?" and "Who is the first woman to be the first sole recipient of a Nobel Prize in Physiology or Medicine?" (The correct answers are provided at the end of this article.)

The Women's History Month also was an opportune time to revisit Women in America (pdf), the first comprehensive federal report since 1963 to examine the conditions of the country's female population. The report was published in 2011 for the White House Council on Women and Girls and offers valuable insights into women's status in the workplace as well.

The Women in America report suggests, for instance, that female college students still specialize in different academic areas than their male counterparts and subsequently enter careers in science, information science, engineering and technology fields in significantly lower numbers than men.

Yet women account for the majority of undergraduate enrollments and in 2008 earned a higher percentage of bachelor's, master's and doctoral degrees than male students.

Connecting women's interest in higher education with an interest in science, technology, engineering and math (STEM) occupations is an important challenge, because as the White House Women in STEM website suggests, "Supporting women STEM students and researchers is not only an essential part of America's strategy to out-innovate, out-educate, and out-build the rest of the world; it is also important to women themselves. Women in STEM jobs earn 33 percent more than those in non-STEM occupations and experience a smaller wage gap relative to men. And STEM careers offer women the opportunity to engage in some of the most exciting realms of discovery and technological innovation. Increasing opportunities for women in these fields is an important step towards realizing greater economic success and equality for women across the board."

Laying the foundation for a brighter future

To encourage New Mexico girls in grades 5 through 8 to explore careers in the STEM fields, the Expanding Your Horizons technical career workshops on March 6 in Santa Fe offered fun hands-on STEM activities and opportunities to meet women working in traditionally male disciplines.

Altogether, 238 girls attended, traveling from as far away as the Mescalero Apache Schools in Mescalero, New Mexico, and the Acoma, Jemez and Zia Pueblos. Sara Brown, an Assistant Professor of Forestry at New Mexico Highlands University who teaches wildfire science and ecology courses, gave the keynote address.

"Because those of us who already work in the STEM disciplines know how interesting and fun these types of careers are, we want to help students discover the wide diversity of topics, people and careers in STEM," said Jan Frigo, Northern New Mexico Expanding Your Horizons chair and a research and development engineer in Los Alamos' Space Data Division.

Workshop titles ranged from "Computational Thinking" and "Crystal Craziness" to "Sports Nutrition" and "Ocean Density, Currents and Ice."

In the "Let's go to the River! Understanding the Middle Rio Grande Environment" session facilitated by the Laboratory's computer scientist Susan Coulter, for instance, the young conference participants had a chance to build a model of what the Rio Grande looked like thousands of years ago. They then explored the changes that have been introduced in the last several hundred years and what the effect has been.

In the "Tails of a Veterinarian" workshop offered by veterinarian Gretchen Yost, attendees discussed medical cases, interpreted x-rays, learned how to administer injections to stuffed animals and practiced suturing.

Students considered the workshops they took "awesome and funny" and loved making "new stuff" and "magic mud."

Teachers meanwhile were able to learn about STEM education resources and familiarize themselves with DNA barcoding and DNA data from a general database.

“As the March 6 event drew to a close,” Frigo noted, “the young women’s comments clearly showed that they left the workshops feeling empowered and wanting to learn more about STEM in the future. One girl even plans to encourage her sister to come to the Expanding Your Horizons conference next March.”

Los Alamos videos offer further insights into science careers

Brief overviews and videos of Laboratory staff members working in STEM fields are featured on the institutional website and provide additional glimpses into technical careers. The videos range from about a minute to three minutes in length and include female scientists like Amy Bauer, Sara Del Valle, Michelle Espy and Karissa Sanbonmatsu.

While growing up, Sara De Valle, for example, watched her parents tend to people suffering from infectious disease while the couple worked as missionaries. At Los Alamos, Del Valle and her team develop mathematical and computer models to study diseases like smallpox, malaria, AIDS and influenza.

Karissa Sanbonmatsu believes that research is like solving complex puzzles. For her, there is nothing more exciting than venturing into unchartered territory.

To learn more about the status of women in educational settings and the workplace, consider visiting the Trends in Educational Equity of Girls and Women (National Center for Education Statistics); Women, Minorities, and Persons with Disabilities in Science and Engineering (National Science Foundation); and Overview of Bureau of Labor Statistics on Women Workers websites.

(Quiz answers: Sally Ride became the first American woman and youngest American to travel into space at age 32. Barbara McClintock received the Nobel Prize in 1983 for her discovery of mobile genetic elements.)